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| Lesson Title | **Solid Figures** |
| Subject/course/grade level | Houghton Mifflin Math  5th grade |
| Introduction | What makes figures solid? Jot down thoughts in math journal |
| Lesson Length | 60 minutes |
| Materials | Vocabulary list, Word Sorts, Chart paper and pens, unlined index cards, Geosolids, Houghton Mifflin math text pgs. 446 and 447, math journal |
| Lesson Overview | 1. Tap prior knowledge, evoke questions, spark interest through word sort  2. Concept development of *solid figure.* Carousel to identify solid figures in the real world.  3. Discuss and define solid figures and their characteristics.  4. Connect concept to the environment and evaluate. |
| Tennessee Standards | Grade 5 Math Power Standard: Find the area, volume, and surface area of geometric figures including irregular shapes, prisms, and polyhedral solids.  0506.4.4 Describe and identify the five regular (Platonic) solids and their properties with respect to faces, shapes of faces, edges, and vertices.  SPI 0506.4.3 Identify a three-dimensional object from two-dimensional representations of that object and vice versa  Language Arts  GLE 0501.2.1 Continue to develop critical listening skills necessary for comprehension and  task completion  GLE 0501.2.4 Participate in teams for work and discussion.  0501.3.5 Compare and contrast two persons, places, things, or ideas. |
| Lesson Objectives | 1. Identify solid figures through literacy strategies.  2. Label solid figures with their distinctive characteristics. |
| **E**ngagement | **Word Sorts** (tap prior knowledge, spark interest, evoke questions)  Students work in groups to conduct an open word sort using vocabulary for the lesson. |
| **E**xploration | **Carousel** (collaborate to identify solid figures in everyday life)  Students will work in groups to list examples of solid figures they have seen or can think of that exist in the world around them. Each sheet has a different solid figure written in te middle of the page. The students will write examples around it. |
| **E**xplanation | **Think-Aloud**  Discuss various types of solid figures and show examples using Geosolids. Use vocabulary such as sides, vertices, and edges to identify types of figures. Use pgs. 446 and 447 as a reference for vocabulary. |
| **E**laboration | **Text Connections** (students p.447)  **Text-to-Text** (Connections to other math? Other subjects?)  **Text-to-Self** (Connections to familiar figures and objects?)  **Text-to-World** (Connections to environment in general?)  **Compare and Contrast**  Use a venn diagram to compare and contrast plane shapes and solid figures. (Chapter 15 for reference of plane shapes) |
| **E**valuation | **Exit Card** (unlined): Sketch, name, label 3 kinds of solid figures. Include nay questions or confusion from the lesson to be addressed by the teacher. |

**Vocabulary**

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|  | length | width | height |
| prism | rectangle | face |  |
| base | pyramid |
| solid figure | cube | vertices | edge |
| vertex | square | sphere | cone |
| cylinder | line segment | flat surface | point |

In [geometry](http://en.wikipedia.org/wiki/Geometry) a **polygon** a [plane](http://en.wikipedia.org/wiki/Plane_(mathematics)) [figure](http://en.wikipedia.org/wiki/Shape) that is bounded by a [closed](http://en.wikipedia.org/wiki/Closed_curve) path, composed of a finite sequence of straight [line segments](http://en.wikipedia.org/wiki/Line_segment). These segments are called its *edges* or *sides*, and the points where two edges meet are the polygon's *vertices* or *corners*.